DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

TED SCHWINDEN, GOVERNOR

Room A201
COGSWELL BUILDING

STATE OF MONTANA

(406) 449-2821

HELENA, MONTANA 59620

March 23, 1983

Board of County Commissioners, Cascade County Courthouse, Great Falls, MT
Pete Frazier, City County Health Dept., 1130 17th Ave., S., Great Falls, MT
William James, Editor, Great Falls Tribune, P.O. Box 2468, Great Falls, MT
City-County Planning board, Civic Center, Great Falls, MT
John Hamill, Flood Plain Mgmt. Section, DNRC 32 S. Ewing, Helena, MT
Fred Shewman, Water Quality Bureau, DHES, Room A206, Cogswell Bldg., Helena, MT
Tom Ellerhoff, Environmental Sciences Division, DHES, Rm. A107, Cogswell Bldg.
Environmental Quality Council, Capitol Bldg., Room 432, Helena, MT
Montana State Library, Harold Chambers, Capitol Station, Helena, MT

Ladies and Gentlemen;

Pursuant to the Administrative Rules of Montana, 16.2.604, the following Preliminary Environmental Review has been prepared by the Department of Health and Environmental Sciences concerning the Cascade County Solid Waste Disposal District's new Vaughn landfill.

The purpose of the Preliminary Environmental Review is to inform all interested governmental agencies, public groups or individuals of the proposed action and to determine whether or not the action may have a significant effect on the human environment. This Preliminary Environmental Review will be circulated for a period of fifteen (15) days at which time a decision will be made as to our future action.

If you care to comment on this proposed action, please do so within the allotted time.

Sincerely,

James E. Leiter

JAMES E. LEITER
Solid Waste Management Bureau
Environmental Sciences Division

JEL:vc
Encls.

DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES
Cogswell Building, Helena, Montana 59620
(406) 449-2821

PRELIMINARY ENVIRONMENTAL REVIEW

Division/Bureau Environmental Sciences Division/Solid Waste Management Bureau

Project or Application New Vaughn Landfill

Description of Project The Cascade County Solid Waste Disposal District has applied for a solid waste management system license for the new Vaughn landfill, which is located immediately south of the old landfill in the NE¼ of Section 24, Township 21N, Range 1E. The new landfill will replace the old community site, and will serve a population of 2585.
(See attached Sheet)

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	Major	Moderate	Minor	None	Unknown	Comments on Attached Pages
1. Terrestrial & aquatic life and habitats		X				X
2. Water quality, quantity and distribution		X				X
3. Geology & soil quality, stability and moisture		X				X
4. Vegetation cover, quantity and quality			X			
5. Aesthetics		X				X
6. Air quality		X				X
7. Unique, endangered, fragile, or limited environmental resources				X		
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical and archaeological sites				X		

POTENTIAL IMPACTS ON HUMAN ENVIRONMENT

	Major	Moderate	Minor	None	Unknown	Comments on Attached Pages
1. Social structures and mores			X			
2. Cultural uniqueness and diversity				X		
3. Local and state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health			X			X
6. Quantity and distribution of community and personal income				X		
7. Access to and quality of recreational and wilderness activities				X		
8. Quantity and distribution of employment				X		
9. Distribution and density of population and housing				X		
10. Demands for government services			X			X
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction Water Quality Bureau, Air Quality Bureau

City-County Health Department

Individuals or groups contributing to this PER.

Recommendation concerning preparation of EIS No EIS necessary

PER Prepared by:

JAMES E. LEITER

Date: March 21, 1983

DHES/ESD-2

DESCRIPTION OF PROJECT

Cascade County has requested application forms to apply for a variance from several operating requirements. Their request states that they intend to ask the Montana Board of Health and Environmental Sciences to grant a variance so that the site may remain open seven days a week, 24 hours per day; so that the site may be left unattended at most times; and so that the district would not be required to cover garbage on weekends and holidays. Since it is unknown at this time specifically what variance requests may be made or whether or not a variance may be granted, this PER will attempt to address all possibilities.

On February 19, 1983, the Cascade County Solid Waste Disposal District opened the new landfill site prior to obtaining the required approval and license from the Montana Department of Health and Environmental Sciences. In response, the department filed action for a restraining order and injunction to prevent operation of the site without the appropriate approvals and license. At the current time, the site is being operated under a consent decree in which the district has agreed to operate the landfill in full compliance with the Montana Solid Waste Management Act and rules pending resolution of any application for a variance which they may submit.

Soils and ground water information for the proposed site were developed in 1975. This information indicated that separation of solid waste from the underlying ground water will, in all probability, be less than the minimum of ten feet required by current solid waste management rules. The report however, did indicate that the permeability of the native soils at the site was such that eight feet of separation would be suitable, but some additional controls would be required to insure protection of ground water and surface water resources of the area.

The department anticipates requiring an on-site ground water monitoring program to insure adequate protection of ground water resources.

The complete application may be examined at this office and copies of the PER or further information are also available upon request.

POTENTIAL IMPACTS ON PHYSICAL ENVIRONMENT

#1) Terrestrial and aquatic life and habitats -

As long as the district keeps an 8 foot minimum separation from solid waste to ground water, and sound operational practices are maintained in order to prevent leachate formation, there should be no adverse affects on aquatic life or habitat. Terrestrial life should not be impacted at all. Any leachate from the site, should it be allowed to migrate to Muddy Creek, could adversely affect small animal and plant life in the stream. Maximum efforts will be necessary to prevent leachate formation, and operational considerations will have to include minimizing contact of solid waste with precipitation, run-on or ground water.

#2) Water quality, quantity, and distribution -

With proper operation and efforts to minimize solid waste/ground and surface water interface, water quality should not be endangered (See #1). During the last major flood event in 1953, the area was a storage area for backwaters of Muddy Creek. Since the area has been diked and will be filled with solid waste, some re-distribution of flood waters downstream can be expected in major flood events, as a minimum of 8-10 acres of flood storage area are made unavailable.

#3) Geology and soil quality, stability, and moisture -

Landfilling is, in essence, replacement of native soil with solid waste materials. The application indicates that the land will be returned to use as grazing land, used as parkland, or potentially developed into a trailer park area. The completed landfill will be subject to some settling which could affect use as a trailer park facility. In addition, the deteriorating solid waste will generate methane gas, which could be limiting for such a use. Restoration to grazing land or parkland should not be a problem.

#4) Vegetation cover, quantity and quality -

The marginal vegetation on the site will be temporarily removed to allow landfilling. Proper completion of the landfill will call for revegetation to control erosion and to encourage transpiration of moisture from the buried solid waste. Any impact will be temporary and relatively insignificant.

#5) Aesthetics -

A properly operated sanitary landfill which includes provisions for daily cover and litter fencing has only minor aesthetic impact. Uncovered garbage over weekends and holidays could dramatically change aesthetics as has been witnessed at the old site in the past. Without proper daily cover, litter, fires, odors and insects could again be a problem of moderate impact.

#6) Air Quality -

In the past, periodic fires occurred at the old dumpsite, in part because it was unsupervised and uncovered. Such fires have a moderate impact on air quality. Properly operated and supervised, a sanitary landfill creates few, if any, air quality problems.

POTENTIAL IMPACTS ON HUMAN ENVIRONMENT

#1) Social structures and mores-

The site should present no problem in this area as long as it is operated in compliance. Under lessened standards, the site can become at least an "eyesore" if not an influence on local attitudes and property values. In the past, the unattended and uncovered dumpsite encouraged scavenging and illegal and unsightly roadside dumping. The old site was, on occasion, the subject of complaints by local citizens and passers-by, who found the dump objectionable. Proper operation as a sanitary landfill can mute complaints of this kind.

#5) Human health -

Again, a properly operated sanitary landfill has no impact on human health. If, however, the site is left uncovered, unattended, and unfenced, scavenging, litter, insect and animal vectors, etc, can create definite public health and safety hazards.

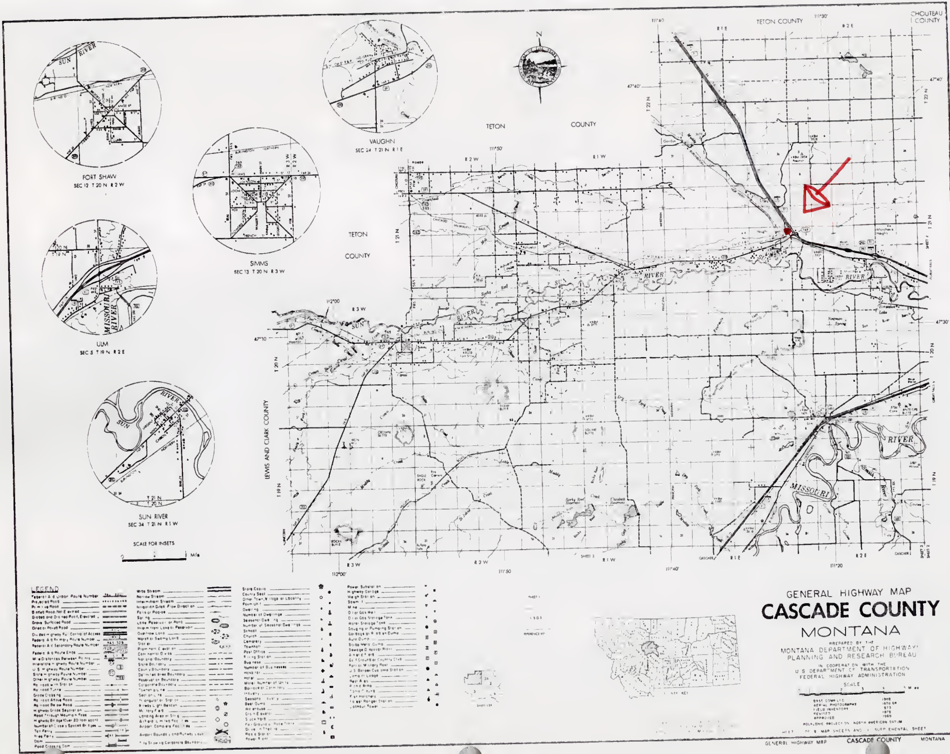
#10) Demands for government services -

Operation of the new landfill will require some increased attention by the solid waste district, the local and state health departments. Any increase should be minor, however.

SUMMARY

The fact that the site is marginal in respect to ground water and flooding potentials emphasizes the need for careful maintenance of good operational practices to minimize the possibility of environmental and public health impact. Operation of the site in accordance with standard sanitary landfilling practices such as daily cover, positive litter control, and strict supervision of the site should mean there will be little, if any, adverse affects from the new location.

Given the marginal nature of the location, however, operation of anything less than a true sanitary landfill could have serious impact on ground and surface water resources and public health and safety.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SEC 12 T 20 N R 2 W
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SUN RIVER
SEC 34 T 21 N R 1 W
SCALE FOR INSETS
TETON COUNTY
CHOUTEAU COUNTY
LEWIS AND CLARK COUNTY
SUN RIVER
MISSOURI RIVER
LEGEND
GENERAL HIGHWAY MAP
CASCADE COUNTY
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PLANNING AND RESEARCH BUREAU
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